

From: [Bill Jacobs](#)  
To: [Alex Wegmann](#)  
Subject: Re: Wake Biomarker  
Date: 02/18/2009 08:45 AM  
Attachments: [PR-94-7\\_9-16-94.pdf](#)  
[StnList042596.pdf](#)  
[ProjOffRpt5-1-90.pdf](#)  
[ProjOffRpt5-1-90APP1PR83-5.pdf](#)  
[ProjOffRpt5-1-90APP2.pdf](#)

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However suitable and useful they might be on islands, Rat-Go bait stations do not qualify as tamper-resistant. Rat-Go units would put bait at least temporarily out of the reach of hermit crabs. See these attachments for more on tamper-resistant bait stations. The second item from the left is a list of the bait station designs that I have seen that were called "adequately protective" -- essentially meaning that, if they were used properly, they would qualify as tamper-resistant bait stations. To be tamper-resistant, a bait station must be designed consistent with the criteria indicated in PR Notice 94-7 (first attachment from left). The remaining 3 items comprise a report that I prepared preparatory to PR Notice 94-7. I also have an item on bait stations in the 1990 VPC proceedings.



[PR-94-7\\_9-16-94.pdf](#)



[StnList042596.pdf](#)



[ProjOffRpt5-1-90.pdf](#)



[ProjOffRpt5-1-90APP1PR83-5.pdf](#)



[ProjOffRpt5-1-90APP2.pdf](#)

It is the responsibility of the applicator to obtain or construct tamper-resistant bait stations. My list is historical, and many of the units on it no longer are available. There is one unit headed for the list, but it's a specialty product designed to be used only on large trash carts. Some commercially offered bait stations that have not been submitted to me for review might qualify as tamper-resistant. Some units that are advertised as tamper-resistant might not meet all of the criteria. It's up to the applicator to judge the appropriateness of the unit.

According to their current labels, the 25D and 25W baits must be used in tamper-resistant bait stations when they are "used in areas of human habitation." That creates a predicament for Wake Atoll which could be resolved by changing "areas of human habitation" to something like "areas inhabited by humans, if children may be present." Such a change would allow tray baiting inside of buildings occupied or visited only by adults, which would be the case with buildings on Wake unless things have changed since I was there. Failing that, a bait registered for use to control commensal rodents in structural situations could be used as long as its label does not expressly limit the product's use to control only Norway rats, roof rats, and house mice, none of which (hopefully) occur on Wake Atoll. Labels for typical commensal rodent baits require use of tamper-resistant bait stations only if placement locations are not otherwise out of reach of children, pets, domestic animals, and nontarget wildlife.

A reasonable interpretation of the label would be that the spacing of bait stations would apply to each floor separately. Typical commensal rodent bait labels call for spacing at intervals of 15-30 feet for rats and 8-12 feet for house mice in structural situations. Those intervals are a lot closer than the labels for 25D and 25W indicate.

If you were to wind up using a commensal rodent bait labeled for structural use to treat buildings, it seems to me that it still would be OK to use the surrogate 25W bait in a biomarker study. The most important thing to determine would be whether animals were accessing bait applied according to label methods. If the bait used were a placebo for the toxic bait to be applied later, the biomarker study also would give you a fix on its attractiveness to the rats.

The labels for 25D and 25W also might be amended to allow more adaptation to local circumstances when bait station applications are made in non-residential areas. A sentence

such as the following might be helpful:

When bait stations are used in uninhabited areas, the stations used should be of designs that limit entry and competition for bait by native island species but do not limit access by rats.

Such text would allow Rat-Go units to be used away from buildings on Wake (which was done in 2007, apparently to little avail).

A couple of weeks ago, I saw a re-broadcast of the History Channel's documentary regarding Wake in WWII. Some vets of that circumstance were brought back to the Atoll. The bridge from Wake to Peale was still up when the filming took place, so it would have been before the 2006 typhoon.

▼ "Alex Wegmann" ---02/17/2009 02:56:58 PM---Hi Bill,

"Alex Wegmann"  
<alex.wegmann@islandconservation.org>

To Bill Jacobs/DC/USEPA/US@EPA  
cc

02/17/2009 02:56 PM

Subject Wake Biomarker

Hi Bill,

Good suggestions (below). I only wish we had thought of it sooner as Bell does not have any active 25D or 25W in stock and there's no time to have them make a batch. If Wake goes to implementation, then this trial will need to happen and there will be time to do that. Also, good idea about working in a "day 3" sample for rat exposure to biomarker, we can do that.

I've got two questions about the 25W label and baiting in areas of human habitation, specifically regarding the following excerpts from the label:

"BAIT STATIONS: Tamper-resistant bait stations must be used when applying this product to grounded vessels or vessels in peril of grounding, or when used in areas of human habitation. Bait must be applied in locations out of reach of children, non-target wildlife, or domestic animals, or in tamper-resistant bait stations."

"TO BAIT RATS: Apply 4 to 16 ounces (113 to 454 grams) of bait per placement. Space placements at intervals of 16 to 160 ft (about 5 to 50 meters). Placements should be made in a grid over the area for which rodent control is desired."

1) We are going to include a commensal area (part of town) in the biomarker study, and want to mimic a real implementation as closely as possible by placing placebo biomarker bait in bait-stations around the outside perimeter of buildings and also inside the buildings. To comply with the label, the stations outside of the buildings must be out of reach to non-target animals, so we will use Rauzon "RatGo" stations for that. My question is, do we still need to use "tamper proof" bait stations inside the buildings if: a) children are not present at Wake Atoll, b) non-target wildlife will not have access inside the buildings, and c) domestic animals will not have access inside the buildings? Inside the buildings where children, non-target wildlife, and domestic animals will not have access to bait regardless of bait station construction, we are planning to use small (10 cm) foil trays to hold the appropriate amount of biomarker bait depending on spacing between stations. Does this seem like a fair interpretation of the label and an appropriate approach to baiting

within human habitations?

2) Does the amount of bait and station spacing stated in the excerpt "TO BAIT RATS:..." apply to an entire building, or each floor of a building?

Regards,

Alex.

-----Original Message-----

From: Jacobs.Bill@epamail.epa.gov [mailto:Jacobs.Bill@epamail.epa.gov]  
Sent: Monday, February 16, 2009 6:09 AM  
To: Alex Wegmann  
Subject: RE: Draft Palmyra Report

While on Wake, see if you can catch and hold a few rats of each type and offer them a choice between the candidate hot baits (25D & 25W), if that has not been done on visits after ours in 2007. We should have done some head-to-head stuff then with a few of the extra animals. The trial doesn't have to extend to death. The idea is to see which bait the rats would rather take if offered a choice (as with the crabs but without coconut, etc.).

The captive-rat biomarker study on Palmyra would have benefitted from better equipment for caging, and especially for feeding and watering rats. It also would have been helpful to have a scale sensitive enough to weigh the amounts of bait offered and a system for catching, collecting, and drying spillage. Counting numbers of pellets offered was easy but rather imprecise as to dosage actually ingested.

For the field trials, it might be useful to have 3-day post-treatment checks as that would be consistent with the post-ingestion interval in the trials with captive rats.

"Alex  
Wegmann"  
<alex.wegmann@islandconservation.org>  
To: Bill  
Jacobs/DC/USEPA/US@EPA  
cc: 02/12/2009  
05:52 PM  
Subject: RE: Draft Palmyra  
Report

Hi Bill,

Thanks for the comments, very appropriate and constructive. Once comments come back from the FWS Folks I will revise the report and redistribute. I'm in Wellington NZ right now, just finished